

Serial No. 10/809,140
Chaouk et al.
Response to Office Action

REMARKS

Restriction Requirement

The restriction requirement is traversed. Product claims 9-12 claim a product that cannot be made by a different method since they are clearly drawn to products made by a specific method. Each of claims 9-12 recites that it is a "hydrogel string formed by the method of claim - --".

Claim Rejection

Claims 1-8 stand rejected under §103(a) as obvious over US 6,152,943 to Sawhney ("Sawhney") in view of U.S. Patent No. 5,443,454 to Tanabe ("Tanabe"). The rejection is traversed.

The Claimed Invention

The claims are drawn to a method for forming a hydrogel string and the hydrogel string formed by the method. The method uses a delivery device having a gelation chamber in which a prepolymer and a gelation initiator are combined to form the hydrogel. The hydrogel is then extruded from the delivery device as a string. In other words, the hydrogel is not formed in the body per se but rather in the delivery device.

The rejection of claims 1-8 as obvious over Sawhney in view of Tanabe

Sawhney teaches a method and device for forming a hydrogel in situ- in a body cavity or void. The method and device involve delivering two liquids to the cavity or void without premature crosslinking- in other words without crosslinking the liquids until they are in the cavity or void. The two liquids can be mixed in a mixing chamber and then "extruded into the body lumen or void during the crosslinking process, to reduce washout ..." (col. 3, lines 20-22) but the crosslinking does not form a hydrogel- only a "partially-formed" gel. FIG. 3 shows an embodiment where the two fluids are mixed in a chamber so that the prepolymer begins crosslinking in the chamber and the "partially-formed gel" is extruded through the outlet ports 47. (column 10, lines 4-13): This is done to reduce or eliminate washout or dilution of the prepolymer solutions during deposition.

Sawhney nowhere suggests that the hydrogel is formed within the mixing chamber or that a solid, formed hydrogel is extruded from the catheter. The material delivered from the catheter in Sawhney is a "partially-formed" gel- not a hydrogel. As the Examiner notes, Sawhney is

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silent on forming or extruding a string. It quite simply does not teach or suggest this element of the claimed invention.


In fact Sawhney teaches away from delivering a hydrogel string— see the abstract which states that the delivery system is configured to deliver two or more prepolymer solutions without premature crosslinking. The hydrogel string of the claimed invention is certainly the result of the “premature crosslinking” that Sawhney teaches to avoid.

The Examiner argues that this aspect of the claimed invention is taught by Tanabe and that one of ordinary skill in the art would have combined the method of Tanabe with that of Sawhney in order to eliminate the dispersing and leakage of an embolic agent out of the site. The Examiner is improperly engaged in hindsight to modify Sawhney to reproduce the invention that is claimed. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992); Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985); W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983) (“To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein only that which the inventor taught is used against its teacher”).

Sawhney already has recognized and provided a solution to the problem of dispersion-delivering a partially polymerized product. One of skill in the art in reading Sawhney would not be motivated to provide a solid composition as taught by Tanabe since Sawhney already teaches a solution. Furthermore, Sawhney specifically teaches to not deliver a solid hydrogel. Moreover, Tanabe is not directed to hydrogel technology.

Since the cited references do not anticipate or render obvious the claims, the issuance of a notice of allowance is respectfully requested.

Respectfully submitted,



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Collen A. Beard

Date: August 22, 2005.